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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,243	05/31/2001	Robert Angelo Mercuri	P-1038	8204
23456	7590	07/27/2006		
WADDEY & PATTERSON 1600 DIVISION STREET, SUITE 500 NASHVILLE, TN 37203			EXAMINER FERGUSON, LAWRENCE D	
			ART UNIT	PAPER NUMBER

1774

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/871,243	<b>Applicant(s)</b> MERCURI ET AL.	
	<b>Examiner</b> Lawrence D. Ferguson	<b>Art Unit</b> 1774	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-13,29,30 and 34-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 29-30 and 34-38 is/are allowed.
- 6) ☒ Claim(s) 1,3-13 and 39-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Amendment***

1. This action is in response to the amendment mailed May 05, 2006. Claims 1, 4-5, 7, 8, 11-12, 29, 39-40, 42-43 and 48 were amended and claims 28, 32 and 51 were cancelled rendering claims 1, 3-13, 29-30 and 34-50 pending in this case.

***Claim Rejections – 35 USC § 103(a)***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-13, and 39-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over White et al (U.S. 6,335,4,328,974) in view of Mercuri et al (U.S. 5,902,762) further in view of Feldman et al (U.S. 5,622,774).

White discloses a material comprising a flexible graphite comprising compressed particles of exfoliated graphite, where the flexible graphite has two different densities of 1.1 g/cc and 0.7 g/cc (column 1, line 49 through column 2, line 15 and 30 and 32 of Figure 1) where the low density flexible graphite sheet formed of compressed particles of exfoliated graphite (30 of Figure 1) is in contact with a second high density flexible graphite sheet formed of compressed particles of exfoliated graphite (32 of Figure 1) to

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form a composite. White does not explicitly disclose the flexible graphite sheets are resin-impregnated.

Mercuri teaches a composite of a resin impregnated flexible graphite sheet or foil (column 2, lines 17-36) where the term "flexible graphite" represents particles of exfoliated graphite (column 1, lines 10-15). The sheet of Mercuri has a thickness of from 0.1 to 3.5mm (column 4, lines 38-40). Mercuri further teaches a phenolic based resin (column 4, lines 9-11). White and Mercuri are both directed to flexible graphite sheet material. It would have been obvious to one of ordinary skill in the art to include the resin impregnated sheets in the flexible graphite material of White to provide improved permeability and stability in the flexible graphite material (column 2, lines 17-19). Regarding the preamble of a material "useful as a substrate for an embossed flexible graphite sheet", it is noted the preamble merely states the intended use of the invention rather than any distinct definition of any of the claimed invention's limitations such that the preamble is given little weight and is not considered to further limit the claim (See MPEP 2111.02). Regarding claims 7 and 39, White et al. as modified by Mercuri et al. does not specifically require a particular flexible graphite sheet material area weight as it would have been obvious to one of ordinary skill in the art, at the time the invention was made to experimentally determine the flexible graphite sheet material area weight as a function of the particular densities required, amount of resin used, etc. as doing so would have required ordinary skill and routine experimentation.

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Neither reference discloses a foraminous material. Feldman teaches a flexible graphite composition having a foraminous layer (column 3, lines 30-40 and column 4, lines 42-45). All of the references are directed to flexible graphite sheet material. It would have been obvious to one of ordinary skill in the art to have employed the foraminous material, as taught in Feldman, in the material of White and Mercuri because the foraminous material provides improved flexibility of the composition and improves bonding between the sheets.

4. Claims 29-30 and 34-38 are allowed. The closest prior art does not teach or suggest the recited material further including a where one flexible graphite sheet comprises between 0.1 g/cc up to 1.3 g/cc and the second flexible graphite sheet comprises at least 1.4 g/cc to no more than 1.8 g/cc. The prior art does not teach motivation or suggestion for modification to make the invention as instantly claimed.

### ***Response to Arguments***

5. Applicant's arguments made regarding rejection made under 35 U.S.C. 103(a) as being unpatentable over White et al (U.S. 6,335,4,328,974) in view of Mercuri et al (U.S. 5,902,762) further in view of Feldman et al (U.S. 5,622,774) have been considered but are unpersuasive. Applicant argues none of the cited references suggests the claimed invention because White does not disclose a plurality of sheets of compressed particles of exfoliated graphite. White discloses a material comprising a flexible graphite comprising compressed particles of exfoliated graphite, where the flexible graphite has two different

densities of 1.1 g/cc and 0.7 g/cc (column 1, line 49 through column 2, line 15 and 30 and 32 of Figure 1) where the low density flexible graphite sheet formed of compressed particles of exfoliated graphite (30 of Figure 1) is in contact with a second high density flexible graphite sheet formed of compressed particles of exfoliated graphite (32 of Figure 1) to form a composite.

In response to applicant's argument that Mercuri does not teach a plurality of sheets having a characteristic different from at least one other of said plurality of sheets, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

White discloses a material comprising a flexible graphite comprising compressed particles of exfoliated graphite, where the flexible graphite has two different densities of 1.1 g/cc and 0.7 g/cc (column 1, line 49 through column 2, line 15 and 30 and 32 of Figure 1) where the low density flexible graphite sheet formed of compressed particles of exfoliated graphite (30 of Figure 1) is in contact with a second high density flexible graphite sheet formed of compressed particles of exfoliated graphite (32 of Figure 1) to form a composite. Although White does not explicitly disclose the flexible graphite sheets are resin-impregnated, Mercuri teaches a composite of a resin impregnated flexible graphite sheet or foil (column 2, lines 17-36) where the term "flexible graphite" represents particles of exfoliated graphite (column 1, lines 10-15).

In response to applicant's argument that Feldman does not comprise a composite article of a plurality of sheets of compressed particles of exfoliated graphite, where at least some of the sheets have distinct characteristics, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). White discloses a material comprising a flexible graphite comprising compressed particles of exfoliated graphite, where the flexible graphite has two different densities of 1.1 g/cc and 0.7 g/cc (column 1, line 49 through column 2, line 15 and 30 and 32 of Figure 1) where the low density flexible graphite sheet formed of compressed particles of exfoliated graphite (30 of Figure 1) is in contact with a second high density flexible graphite sheet formed of compressed particles of exfoliated graphite (32 of Figure 1) to form a composite. Although neither reference discloses a foraminous material, Feldman teaches a flexible graphite composition having a foraminous layer (column 3, lines 30-40 and column 4, lines 42-45).

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is 571-272-1522. The examiner can normally be reached on Monday through Friday 9:00 AM – 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should



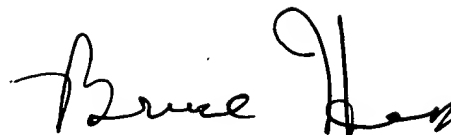
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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).



L. Ferguson  
Patent Examiner  
AU 1774



BRUCE H. HESS  
PRIMARY EXAMINER